Cluster of late preterm and term neonates with necrotizing enterocolitis symptomatology: descriptive and case-control study.

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Abstract

OBJECTIVE:
To investigate a necrotizing enterocolitis (NEC) cluster of late preterm and term neonates (gestational age ≥34 weeks).

METHODS:
We conducted a descriptive and a case-control study. Medical records of neonates with modified Bell stage ≥ IB NEC and matched controls were reviewed, in addition to microbiological and environmental investigation. Study variables included maternal/delivery and neonatal factors, medications, procedures and feeding practices. Univariable/multivariable logistic regression analyses were performed for all and for stage ≥ II cases.

RESULTS:
Out of 1841 late preterm and term neonates, 10 stage IB and 10 stage ≥ II [mean(SD) birthweight 2529.3 (493.04) g, gestational age 36.96 (1.48) weeks] presented with NEC symptomatology at mean 4.6 (range 2-8) days. Nearly all (19/20) resulted from high-risk pregnancies and received postpartum intermediate care. All were exclusively or partly formula fed. Most (14/20) were born by cesarean delivery. Eight underwent surgery, with no fatality. Intermediate care (p = 0.006), transient tachypnea (p = 0.049), not receiving breast milk (p = 0.019) and in addition intrauterine growth restriction (IUGR) (p = 0.017) for stage ≥ II cases were independently associated with NEC.

CONCLUSIONS:
Late preterm and term neonates in need of intermediate care, with IUGR and transient tachypnea were susceptible to NEC; feeding with breast milk was an important protective factor.

KEYWORDS:
Breast milk; NEC; late preterm; risk factors; term infant